

LAB 2

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LAB: CSE4002 Mobile Application Development LAB

1. Design the following APP for the IOT store. The cost of Arduino Uno is 500RS, the cost of WIFI module is 250RS and the Bluetooth module is 200RS. Based on the quantity, compute the Amount payable when the submit button is clicked, When clear is clicked clear all the Editboxes.

MainActivity.Java

```
package com.example.lab2_billing;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    private EditText arduino ;
```

```
private EditText wifi;

private EditText bluetooth;

private EditText amount;


private final int ARDUINO_COST=500;

private final int WIFI_COST=250;

private final int BLUETOOTH_COST=200;

@Override

protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);


    arduino=(EditText) findViewById(R.id.editText2);

    wifi=(EditText) findViewById(R.id.editText3);

    bluetooth=(EditText) findViewById(R.id.editText3);

    amount=(EditText) findViewById(R.id.editText5);


}


public void handleSubmit(View view) {

    try{

        int

arduino_quantity=Integer.parseInt(arduino.getText().toString());

        int wifi_quantity=Integer.parseInt(wifi.getText().toString());

        int

bluetooth_quantity=Integer.parseInt(bluetooth.getText().toString());
```

```

        double totalAmount = (arduino_quantity * ARDUINO_COST) +
(wifi_quantity * WIFI_COST) + (bluetooth_quantity * BLUETOOTH_COST);

        amount.setText(String.valueOf(totalAmount));

    } catch (Exception e) {

        Toast.makeText(this, e.getMessage(), Toast.LENGTH_LONG).show();

    }

}

public void handleClear(View view) {

    arduino.setText("");

    wifi.setText("");

    bluetooth.setText("");

    amount.setText("");

}

}

```

XML Code -

```

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

```

```
<TextView

    android:id="@+id/textView"

    android:layout_width="141dp"

    android:layout_height="19dp"

    android:text="IOT Store"

    tools:layout_editor_absoluteX="12dp"

    tools:layout_editor_absoluteY="16dp"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toTopOf="parent"

/>
```

```
<TextView

    android:id="@+id/textView2"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginStart="36dp"

    android:layout_marginTop="32dp"

    android:text="Items"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<TextView

    android:id="@+id/textView3"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"
```

```
    android:layout_marginStart="36dp"

    android:layout_marginTop="28dp"

    android:text="Arduino Uno"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView2" />
```

```
<TextView
```

```
    android:id="@+id/textView4"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginStart="32dp"

    android:layout_marginTop="32dp"

    android:text="Wifi Module"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView3" />
```

```
<TextView
```

```
    android:id="@+id/textView5"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginStart="36dp"

    android:layout_marginTop="28dp"

    android:text="Bluetooth"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView4" />
```

<Button

```
    android:id="@+id/button"
    android:layout_width="94dp"
    android:layout_height="45dp"
    android:layout_marginStart="16dp"
    android:layout_marginTop="28dp"
    android:text="Submit"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView5"
    android:onClick="handleSubmit"/>
```

<Button

```
    android:id="@+id/button2"
    android:layout_width="90dp"
    android:layout_height="45dp"
    android:layout_marginStart="140dp"
    android:layout_marginTop="28dp"
    android:text="Clear"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@id/textView5"
    android:onClick="handleClear"/>
```

<TextView

```
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"

    android:layout_marginStart="28dp"

    android:layout_marginTop="44dp"

    android:text="Amount Payable"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/button2" />
```

<EditText

```
    android:id="@+id/editText2"

    android:layout_width="130dp"

    android:layout_height="40dp"

    android:layout_marginTop="52dp"

    android:ems="10"

    android:inputType="none|text"

    android:textAppearance="@style/TextAppearance.AppCompat.Display1"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.648"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

<EditText

```
    android:id="@+id/editText3"

    android:layout_width="130dp"

    android:layout_height="40dp"
```

```
android:layout_marginTop="104dp"

android:ems="10"

android:inputType="none|text"

android:textAppearance="@style/TextAppearance.AppCompat.Display1"

app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_bias="0.648"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/textView" />
```

<EditText

```
android:id="@+id/editText4"

android:layout_width="130dp"

android:layout_height="40dp"

android:layout_marginTop="156dp"

android:ems="10"

android:inputType="none|text"

android:textAppearance="@style/TextAppearance.AppCompat.Display1"

app:layout_constraintEnd_toEndOf="parent"

app:layout_constraintHorizontal_bias="0.648"

app:layout_constraintStart_toStartOf="parent"

app:layout_constraintTop_toBottomOf="@+id/textView" />
```



```
<EditText
```

```
    android:id="@+id/editText5"

    android:layout_width="130dp"

    android:layout_height="40dp"

    android:layout_marginTop="292dp"

    android:ems="10"

    android:inputType="none|text"

    android:textAppearance="@style/TextAppearance.AppCompat.Display1"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintHorizontal_bias="0.677"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<TextView
```

```
    android:id="@+id/textView7"

    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:layout_marginStart="216dp"

    android:layout_marginTop="32dp"

    android:text="Quantity"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

OUTPUT -

The image displays two side-by-side screenshots of an Android application titled "Lab2_Billing". Both screenshots show a status bar at the top with the time, signal strength, Wi-Fi, and battery level (90%).

Left Screenshot (2:03 PM):

- Header:** "Lab2_Billing" in a blue bar.
- Section:** "IOT Store" in a light blue bar.
- Table:** A table with two columns: "Items" and "Quantity".

Items	Quantity
Arduino Uno	<input type="text"/>
Wifi Module	<input type="text"/>
Bluetooth	<input type="text"/>
- Buttons:** Two blue buttons labeled "SUBMIT" and "CLEAR".
- Amount Payable:** A label "Amount Payable" followed by an empty text input field.

Right Screenshot (2:18 PM):

- Header:** "Lab2_Billing" in a blue bar.
- Section:** "IOT Store" in a light blue bar.
- Table:** A table with two columns: "Items" and "Quantity".

Items	Quantity
Arduino Uno	2
Wifi Module	3
Bluetooth	4
- Buttons:** Two blue buttons labeled "SUBMIT" and "CLEAR".
- Amount Payable:** A label "Amount Payable" followed by a text input field containing the value "2350.0".

Below the screenshots are two sets of Android navigation bar icons: a square, a circle, and a triangle.

2. Design a Currency converter App. 1 RS=

MainActivity.Java

```
package com.example.lab2;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.TextView;


public class MainActivity extends AppCompatActivity {

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

        final Button b1=(Button)findViewById(R.id.button);

        b1.setOnClickListener(new View.OnClickListener() {

            public void onClick(View v) {

                final EditText e1 =(EditText)findViewById(R.id.editText2);

                final TextView t1 =(TextView)findViewById(R.id.textView2);

                final RadioGroup
rg=(RadioGroup)findViewById(R.id.radioGroup);

                final int i=rg.getCheckedRadioButtonId();
```

```

final RadioButton rd=(RadioButton)findViewById(i);

int ab =Integer.parseInt(e1.getText().toString());

if(rd.getText().equals("USD"))
{
    t1.setText(String.valueOf(ab*0.014));
}

else if (rd.getText().equals("EURO"))
{
    t1.setText(String.valueOf(ab*0.214));
}

else if (rd.getText().equals("YEN"))
{
    t1.setText(String.valueOf(ab*1.014));
}

}

});

}

}

```

XML Code -

```
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:app="http://schemas.android.com/apk/res-auto"

    xmlns:tools="http://schemas.android.com/tools"

    android:layout_width="match_parent"

    android:layout_height="match_parent"

    tools:context=".MainActivity">

    <TextView

        android:id="@+id/textView"

        android:layout_width="250dp"

        android:layout_height="170dp"

        android:text="CURRENCY CONVETER"

        android:textAppearance="@style/TextAppearance.AppCompat.Display2"

        android:textColor="#24C02A"

        android:textColorHighlight="#24C02A"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/editText2"

        app:layout_constraintTop_toTopOf="parent" />

    <RadioGroup

        android:id="@+id/radioGroup"

        android:layout_width="250dp"

        android:layout_height="150dp"
```

```
        app:layout_constraintBottom_toTopOf="@+id/button"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/editText2">
```

```
        <RadioButton android:id="@+id/radioButton"

            android:layout_width="match_parent"

            android:layout_height="wrap_content"

            android:text="USD"

            android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        />
```

```
        <RadioButton android:id="@+id/radioButton2"

            android:layout_width="match_parent"

            android:layout_height="wrap_content"

            android:text="EURO"

            android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        />
```

```
        <RadioButton android:id="@+id/radioButton3"

            android:layout_width="match_parent"

            android:layout_height="wrap_content"

            android:text="YEN"
```

```
        android:textAppearance="@style/TextAppearance.AppCompat.Display1"
    />
```

```
</RadioGroup>
```

```
<EditText android:id="@+id/editText2"

    android:layout_width="250dp"

    android:layout_height="80dp"

    android:ems="10"

    android:hint="In Rs "

    android:inputType="none|text"

    android:textAppearance="@style/TextAppearance.AppCompat.Display1"

    app:layout_constraintBottom_toTopOf="@+id/radioGroup"

    app:layout_constraintEnd_toEndOf="parent"

    app:layout_constraintStart_toStartOf="parent"

    app:layout_constraintTop_toBottomOf="@+id/textView" />
```

```
<Button

    android:id="@+id/button"

    android:layout_width="250dp"

    android:layout_height="75dp"

    android:text="CONVERT"

    android:textAppearance="@style/TextAppearance.AppCompat.Display1"

    app:layout_constraintBottom_toTopOf="@+id/textView2"
```

```
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/radioGroup" />

<TextView android:id="@+id/textView2"

        android:layout_width="250dp"

        android:layout_height="75dp"

        android:textAppearance="@style/TextAppearance.AppCompat.Display2"

        app:layout_constraintBottom_toBottomOf="parent"

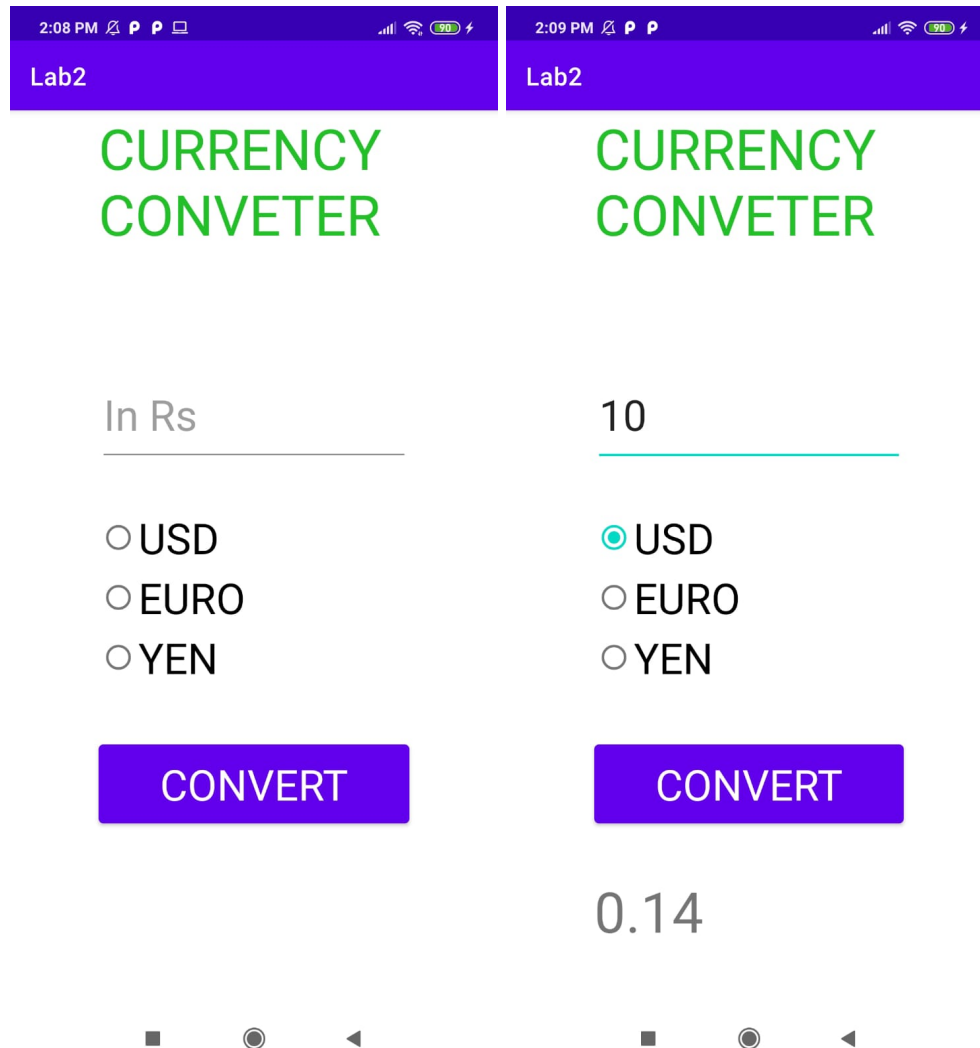
        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toBottomOf="@+id/button" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

OUTPUT -



CURRENCY CONVETER

20

- ☐ USD
☒ EURO
☐ YEN

CONVERT

4.28



CURRENCY CONVETER

50

- ☐ USD
☐ EURO
☒ YEN

CONVERT

50.7

